

rigida Mill., with leaves reaching seven inches in length, decidedly longer than in the common form about here. — E. B. HARGER, Oxford, Ct.

At the approaching meeting of the American Association for the Advancement of Science, which occurs at Columbus, the home of the distinguished bryologists, W. S. Sullivant and Leo Lesquereux, the subject of the mosses will receive a fitting prominence in the exercises of the botanical section. Historical papers on the development of American bryology will be read and a collection of important specimens, photographs, rare papers, microscopic preparations, portraits, manuscripts, etc., of special interest to moss-students will be brought together for exhibition. The following well-chosen committee have charge of this feature of the Columbus meeting: Professor C. R. Barnes, Univ. of Chicago; Mrs. N. L. Britton, N. Y. Botanical Gardens; Professor W. A. Kellerman, Ohio State Univ.; Dr. G. G. Kennedy, Readville, Mass.; Professor L. M. Underwood, Columbia Univ.

TWO AMBIGUOUS LOOSESTRIFES FROM THE NORTHERN STATES.

M. L. FERNALD.

(Plate 6.)

A VERY handsome loosestrife, with racemes often a foot and a half long, has been collected in several parts of New England during the past few years. By some it has been considered a form of *Lysimachia stricta*, by some a form of *L. quadrifolia*, while others have regarded it as intermediate between those two common species. Attention was recently called to the plant in New England by Dr. Geo. G. Kennedy, who collected it in 1889 at Sorrento, Maine, and in the following year at Milton, Massachusetts. In July, 1897, Messrs. Edwin Faxon, Edward L. Rand and Emile F. Williams found it in some abundance on Mt. Desert Island; in the autumn of that year Miss Kate Furbish brought from Gilead, Maine, fruiting specimens of the same thing; and in the summer of 1898 the writer was shown by Miss Rebecca Gill a drawing of the plant made by her at Peterboro, New Hampshire.

The plant has been known to botanists, however, for many years. It is without doubt the form described by Dr. Gray in the second edition of the Manual as *Lysimachia stricta*, var. *producta*. Dr. Gray's only specimen was collected in Michigan, but he refers to his variety a portion of Michaux's *L. racemosa*¹ from New York. From Michaux's description alone there is little to suggest Dr. Gray's var. *producta*. Michaux describes his plant as having opposite leaves, and he cited a figure of Plukenet's² which is obviously the common *L. stricta*, with its definitely terminal raceme shorter than in the var. *producta*. In examining the Michaux herbarium, however, Dr. Gray noted that his specimen of *Lysimachia racemosa* is a "strange and monstrous form of *L. stricta*, with a raceme eighteen inches long, ped[icel] one inch, twice the length of the foliaceous bract, the whole terminated by a little tuft of bracteal leaves. Pedicels also in the axils of the upper leaves." This plant is probably identical with Dr. Gray's var. *producta*, and the specimens which have recently puzzled New England botanists. Lamarck had formerly described as *L. racemosa*³ a plant with lanceolate opposite leaves which is clearly the older *L. stricta*, Ait.,⁴ and, in his description, Lamarck cited the same Plukenet figure which was referred to by Michaux as representing his own *L. racemosa*. It appears, then, that the species of Michaux was a confusion of two plants: one the true *L. stricta*, Ait., the other the var. *producta*, Gray.

The plant has apparently been mentioned occasionally in local lists and notes (Peck's 47th Rep. 31, for example) as a variety of *L. stricta*. The latter species, however, in its typical form has the terminal raceme rarely 2.5 dm. long, beginning definitely above the upper stem-leaves, which are lanceolate, glaucous and hardly veiny beneath, and opposite. In the variety *producta*, on the other hand, the leaves, not otherwise unlike those of *L. stricta*, are often subverticillate or definitely verticillate in 3's, 4's, or 5's, as in *L. quadrifolia*. The pedicels are borne in the axils of the upper leaves as in *L. quadrifolia*, but unlike that species the raceme is very elongated, the upper leaves passing gradually to the floral-leaves or leafy bracts. Though in its inflorescence and especially in the axillary lower pedicels the plant is somewhat like *L. quadrifolia*, it is in other respects quite as distinct from that as from *L. stricta*, with its definite terminal raceme. In its very elongated bracteate raceme the plant is of course strikingly

¹ Michx. Fl. i. 128.² Pluk. Phytog. t. 428, f. 4.³ Lam. Dict. iii. 570.⁴ Aiton, Hort. Kew. ed. 1, i. 199.

unlike *L. quadrifolia*; and the leaves, which in *L. quadrifolia* are broader, generally less attenuate and not pale beneath, in the variety *producta* are nearly as pale as in *L. stricta*.

Another plant with the same affinities as *Lysimachia stricta*, var. *producta*, but habitually very unlike it, was found in late July, 1898, by Mr. J. C. Parlin and the writer, in a damp thicket back of Wells Beach, Maine. This plant, which there occurred in great abundance, combines to some extent the characters of *L. stricta* and *L. quadrifolia*. Unlike *L. stricta*, var. *producta*, however, it has the broad, hardly glaucous and strongly veiny whorled leaves of *L. quadrifolia*, but the lower pedicels of the very long raceme are borne in the upper axils as in both those plants. The leaves change, though, very abruptly to short foliaceous bracts subtending the rather crowded pedicels. In the preparation of their Flora of North America, Torrey and Gray considered a similar plant — from White Plains, New York, and from Washington, D. C. — as a variety of *Lysimachia quadrifolia*, and it was noted as such (without a name) by Dr. Gray in the second edition of the Manual.

It has been suggested that these two plants, combining as they do certain characters of *Lysimachia stricta* and the earlier flowering *L. quadrifolia*, may be hybrids between them. Such an origin for the plants is not impossible; but, as *L. stricta* generally begins to flower after *L. quadrifolia* has practically passed its flowering season, and as the one occurs usually in dry woods or open, dry soil, and the other in very wet places (though both are rarely found together), it does not seem probable that they would freely hybridize, nor, should hybrids occur, that they would be found so abundantly over large areas. Furthermore, the so-called variety *producta* was collected by the late Herbert A. Young on Oak Island, as a variety of *L. quadrifolia*, but the true *L. stricta* was not included by him in his very exhaustive Flora of Oak Island. And at Wells Beach, where the other plant with a long raceme was found, *L. quadrifolia* of the dry soil was quite past flowering in late July, when the more showy plant was at the height of its blooming. The opposite-leaved *L. stricta*, however, with its definite shorter raceme, was then flowering near by. It is quite possible that these plants, in some of their characters suggesting hybrids between *Lysimachia stricta* and *L. quadrifolia*, may have had such origins. Their great abundance, however, in the regions where they occur, and their very broad distribution, together with their constant and char-

acteristic habits, tend to show that these plants have now attained a degree of permanence, making the treatment of them as species more satisfactory.

The name, *Lysimachia racemosa*, which probably referred in part to the plant just discussed in these notes, was, as already explained, unfortunately used by Michaux for *L. stricta* as well. And, furthermore, to take up that name, formerly applied by Lamarck to *L. stricta*, would lead to confusion. The varietal name used by Dr. Gray to designate this plant is the first which is quite free from confusion and possible doubt, and it is here applied to the plant now proposed as a species. The other plant, from Wells Beach, etc., although described, appears never to have received a name.

Lysimachia producta. Stem glabrous, 0.5 to 1 m. high, simple or slightly branched: leaves opposite or in whorls of from 3 to 5, lanceolate, pale green or glaucous and scarcely veiny beneath, longer than the lower axillary pedicels (2 or 3 cm. long): raceme terminal, 5 dm. or less in length, the ascending pedicels subtended by leafy bracts gradually diminishing in size towards the tip of the loosely flowered raceme: calyx 5 to 7 mm. high, the 5 divisions lance-attenuate: corolla 1.5 to 2 cm. broad, crimson at the base; the divisions ovate-oblong, rounded at the tips, with many dark lines: filaments unequal, dilated below, and united into a cup 1.5 to 2 mm. high, the sinuses broad and rounded. — *L. racemosa*, Michx. Fl. i. 128, in part, not Lam. *L. stricta*, Ait., var. *producta*, Gray, Man. ed. 2, 272. — In damp thickets and low ground, Maine and Massachusetts to Michigan. MAINE, Sorrento, Aug. 10, 1889 (*Geo. G. Kennedy*); Mt. Desert Island, — head of North East Harbor and Lower Hadlock Pond, July 12, 1897 (*E. Faxon, E. L. Rand, E. F. Williams*), Upper Hadlock Pond, July 9, 1898, Wildwood Farm road, July 11, 1898, Long Pond Meadows, July 22, 1898 (*E. L. Rand*); by the Androscoggin, Gilead, September, 1897 (*Miss Kate Furbish*): NEW HAMPSHIRE, Peterboro, July, 1898 (*Miss Rebecca Gill*): MASSACHUSETTS, Grantville (Wellesley), July 12, 1854 (*Wm. Boott*); Oak Island, Revere, July 16, 1882 (*Herbert A. Young*); Milton, June 22, 1890 (*Geo. G. Kennedy*): NEW YORK, reported by *Prof. C. H. Peck* (47th Rep. 31) from Narrowsburg, and originally collected in "New Yorck" by the elder *Michaux*: MICHIGAN, without statement of locality and collector (Gray Herb.).

L. polyantha. Stem glabrous, 6 to 9 dm. high, simple or branched above: leaves generally in whorls of from 3 to 5, rarely opposite, ovate-lanceolate, rather veiny beneath, not glaucous, longer than the axillary pedicels (2 cm. in length), changing abruptly above to foliaceous bracts: racemes terminal, the primary one from 5 cm. to 5 dm. long, profusely flowered (often densely so at the tips), the slender

spreading or slightly ascending pedicels subtended by lanceolate bracts about half their length: calyx about 4 cm. high, the divisions lance-attenuate: corolla as in *L. producta*, but the oblong-lanceolate divisions narrower: the sinuses between the filaments narrow and acute. — *L. quadrifolia*, L., var., Gray, l. c. 273. — In damp thickets, Maine to the District of Columbia. MAINE, Wells Beach, July 23, 1898 (*J. C. Parlin & M. L. Fernald*): NEW YORK, White Plains (*H. J. Clark*): DISTRICT OF COLUMBIA, Washington (*Dr. Crandall*).

EXPLANATION OF PLATE 6. — *Lysimachia producta*: fig. 1, upper portion of plant, reduced; fig. 2, corolla; fig. 3, androecium. *L. polyantha*: fig. 4, upper portion of plant, reduced; fig. 5, corolla; fig. 6, androecium.

PINUS BANKSIANA ON MT. DESERT ISLAND. — Since the discovery of the northern scrub pine (*Pinus Banksiana*, Lamb.) on Schoodic Mountain and about Prospect Harbor, in the coast town of Gouldsboro, Maine,¹ I have expected to find it on Mount Desert Island as well, although the wide expanse of Frenchman's Bay intervenes. After much unsuccessful search in all parts of the Island, I was fortunate enough in July, 1898, to discover it on an eastern slope of Green Mountain. There were about thirty small trees from six to twelve feet in height — all cone-bearing — scattered over a small area on a sheltered part of the mountain side. Owing to the protected situation, the trees were symmetrical, not dwarfed and contorted like those on Schoodic Mountain, or flattened and weather-beaten like those of the pitch pine (*Pinus rigida*, Mill.) on the exposed ridges elsewhere on Green Mountain. I noticed a few young trees of *P. Banksiana*, so that, if spared by fire, this interesting pine ought to increase at this station.

It should be here mentioned that it was reported some years ago to the late Edwin Faxon and myself, that on a certain farm near Long Heath, east of Somesville, a rather tall tree, "somewhere between a spruce and a pine," and the only one of its kind, had grown for many years. After one or two unsuccessful attempts we found the spot where the tree had been until broken down by an ice storm the winter before. No trace of it was then left from which its identity could be determined, but there is good reason to suppose that it was *Pinus Banksiana*. After the discovery of the Green Mountain station I took specimens of the pine to Somesville and showed them to persons who knew and had

¹ Bull. Torr. Bot. Club, 16: 294, 295.